Goals, Problems, and Potential Mitigation for the Salmon Creek Basin

Salmon Creek Goals:

- Increase fish usage
- Improve water quality in the stream, upper basin, and in flows discharging from the by-pass line
- Control flooding and hazardous erosion[1] in the stream and throughout the basin

[1] *Hazardous erosion* means erosion severe enough to pose harm to human health, safety, and/or property.

Salmon Creek Fish Usage

Problems identified:	Potential mitigation:	Implementation challenges:
• there have been no sitings of fish during basin plan preparation, but the potential maximum productivity is about 250 fish/year under pristine conditions • lack of estuary and near-shore habitat • partial fish passage barrier at mouth • lack of channel complexity in lower reach • fish passage barrier at culvert under Shorewood Drive SW • need for stream-side plantings in lower reach	• create an estuary and near-shore habitat • remove partial fish passage barrier at mouth • increase channel complexity • install baffles in the Shorewood Drive SW culvert • involve citizens in habitat restoration projects • develop community education and stream stewardship programs • maintain city-owned riparian property as undeveloped open space • purchase undeveloped riparian properties from willing sellers, as opportunities arise over time	• policy issue regarding cost/benefit of habitat restoration – is limited fish usage worth restoration costs or is limited funding better spent elsewhere • estuary has been fully developed and is in private ownership • limited benefit to other habitat projects without estuary • some property owners may not wish to participate in habitat restoration • limited public funding for habitat improvements

Salmon Creek Water Quality

Problems identified:	Potential mitigation:	Implementation challenges:
• historic data indicate levels of metals, especially zinc and copper, are high throughout basin • Lake Hicks (Lake Garrett) exceeds water quality standards for fecal coliform bacteria and phosphorus • some evidence of illicit discharges to the storm drain system • no recent water quality data • lack of water quality treatment in basin	• improve water quality in the wetland systems starting at the White Center Pond area and draining to Lake Hicks (Lake Garrett) by increasing dead storage and/or creating separate water quality treatment facilities • alter landscaping by lakes to reduce the numbers of resident geese • conduct an illicit connections survey in the upper watershed • collect more water quality data • increase water quality treatment requirements for future development • retrofit existing developed areas with water quality treatment • require application of low-impact development measures that improve WQ • develop community education programs to work on source control to reduce pollutant loadings to stream • coordinate with Southwest Suburban Sewer District regarding operations and potential discharges to stream • improve current programs for identifying and enforcing WQ violations • improve current programs for inspecting and maintaining treatment facilities	• need to balance water quality improvements with flood protection potential of facilities • diffuse and varied pollutant sources, difficult to implement treatment and prevention of pollution • limited funding for treatment improvements

Salmon Creek Flooding and Hazardous Erosion

Problems identified:	**Potential mitigation:**	**Implementation challenges:**
• potential for flooding and erosion if by-pass line fails • by-pass outfall is broken • historic flooding at Lake Hicks (Lake Garrett) due to pump failures	• videotape the by-pass line to assess conditions and problems • develop a routine assessment and maintenance or upgrade program for the bypass line • disconnect beach manhole from service and shorten pipeline so that outfall will be closer to the stream bank • maintain current flow control regulations • complete pump station upgrades at Lake Hicks (Lake Garrett) • develop an operations plan for the Lake Hicks (Lake Garrett) pump station that will minimize local flooding and downstream impacts on the bypass line • continue current programs for inspecting and maintaining flow control and conveyance facilities	• if by-pass line needs replacement, it will be very expensive